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Preliminary Ecological Appraisal

Site Name

Danefold Farm

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Client

Danefold Farms

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About the Author

This report has been prepared by Joshua Harwood, a Project Ecologist at The Ecology Co-op, with 8 years' experience. He has a Level 1 great crested newt survey licence. As a member of the Chartered Institute for Ecology and Environmental Management (CIEEM), he is bound by their code of professional conduct.

About the Reviewer

This report has been reviewed by Kate Priestman, who is a Principal Ecologist with over twenty years' experience. Kate has undertaken extensive survey work and reporting, encompassing a breadth of deliverables, and prepared European Protected Species licences for numerous schemes. As a Full member of the Chartered Institute of Ecology and Environmental Management (CIEEM) and a Chartered Environmentalist (CEnv), she is bound by CIEEM's code of professional conduct.



Report Summary

Purpose	The Ecology Co-op was commissioned by Danefold farms to undertake a Preliminary Ecological Appraisal at Danefold Farm, further to a proposal to create a slurry lagoon with associated bunker features.
Context	This site measures 2.43ha and is situated to the south of Horsham district, located between West Grinstead and Cowfold villages. The site is currently used for occasional cattle grazing, whilst the northern and westernmost aspects of the site are being enhanced as a small off-site area for a separate Biodiversity Net Gain (BNG) application (reference unknown). The site is located within the post code: RH13 8NA, with the central grid reference of the site: TQ 18814 22105.
Key findings	The site is situated between two parcels of priority woodland with one classified as ancient woodland; a number of waterbodies have been identified within 250m of the site with three ponds located within 200m of the site that were eDNA sampled for great crested newts (GCN) <i>Triturus cristatus</i> . Two of these ponds were confirmed to have GCN presence with the closest pond being absent for GCN eDNA.
Recommendations	The site is considered highly likely to require a mitigation licence for works relating to GCN. This can be undertaken through a standard licence or as a district level licence, depending on the method, additional surveys may be required to inform the appropriate licencing route.



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1 INTRODUCTION

1.1 Purpose of the Report

The Ecology Co-op has been commissioned to undertake a Preliminary Ecological Appraisal (PEA) of land at Danefold Farm by Danefold farms. This report presents the findings of a walkover survey undertaken by Joshua Harwood, an Associate member of the Chartered Institute of Ecology and Environmental Management (ACIEM) and Natural England Level 1 Great Crested Newt Survey Class Licence holder, on the 8th April 2025. It provides details on the potential for any protected/notable species and/or habitats to be present at the site and a simple assessment of the potential ecological constraints and opportunities in relation to the proposed development of a slurry lagoon and associated bunker features. Recommendations for further surveys that are likely to be required to inform a planning application and Ecological Impact Assessment (EclA) of the proposal are provided where necessary, and possible measures to avoid, mitigate and/or compensate for significant adverse effects are summarised. The potential to incorporate ecological enhancement measures as part of the scheme is discussed, in addition to any requirement to achieve biodiversity net gain.

This PEA report is designed to inform the client and their team (as appropriate) about the initial findings of the site walkover and desk study research in relation to the site proposals, highlighting the key ecological constraints and opportunities, and any further survey requirements. It is not intended for submission in support of a planning application but can be used to inform a future Ecological Impact Assessment (EclA).

1.2 Background

This site measures 2.43ha and is situated to the south of Horsham district located between West Grinstead and Cowfold villages. The site is currently used for occasional cattle grazing, whilst the northern and westernmost aspects of the site are being enhanced as a small off-site area for a separate Biodiversity Net Gain (BNG) application (reference unknown). The site is located within the postcode: RH13 8NA, with the central grid reference of the site: TQ 18814 22105; Figure 1 shows the boundary of the site.

The proposed development/project includes the creation of a slurry lagoon and two bunker features with associated reprofiling of the existing topography to accommodate the design proposals, see Figure 2.



Figure 1. An aerial image showing the location of the site. The approximate site boundary is outlined in red. Image produced courtesy of Google maps (map data ©2025 Google).



Figure 2. Proposed scheme layout for the development at Danefold Farm, produced courtesy of PJ Brown, drawing number 190924_002, dated 19th September 2024.

1.3 Policy and Legislation

Legal protection applying to relevant bird, mammal, herpetofauna, invertebrate species and flora, and current nature conservation planning policy is outlined in Appendix 1 of this report.

Where possible, this report provides guidance on how the proposal can be designed to meet the requirements of both local planning policy and the National Planning Policy Framework (NPPF). Details of the NPPF can be found in Appendix 1 and relevant local planning policy by Horsham District Council is provided in Appendix 2.

2 METHODOLOGY

The methodologies used for this survey are in accordance with the Guidelines for Preliminary Ecological Appraisal¹, but also consider the Guidelines for Ecological Report Writing, Second Edition².

¹ CIEEM (2017). *Guidelines for Preliminary Ecological Appraisal, 2nd edition*. Chartered Institute of Ecology and Environmental Management, Winchester.

² CIEEM (2017). *Guidelines for Ecological Report Writing, 2nd edition*. Chartered Institute of Ecology and Environmental Management, Winchester.



2.1 Desk Study

A search for existing records of protected species, species of conservation concern and invasive non-native species was requested from the Sussex Biodiversity records centre (SxBRC) within a radius of 1km of the site.

A search of on-line mapping resources was undertaken to identify the location of any features of potential ecological interest including ponds within 500m (relevant to great crested newts *Triturus cristatus*), watercourses (relevant to riparian mammals and crayfish) and connectivity to woodland, scrub, and hedgerow networks (relevant to bats and dormice *Muscardinus avellanarius*) in the wider landscape around the site. The connectivity of the site to these features, buildings and other semi-natural habitats, such as grassland and heathland, are also relevant to great crested newts, reptiles and a wide variety of notable species of conservation concern.

The MAGIC website resource (www.magic.gov.uk) was used to identify the location of designated sites for nature conservation and European Protected Species (EPS) licences granted in relation to the survey site.

2.2 Field Survey

A site walkover survey was undertaken on the 8th April 2025, during which the habitats contained within the site were described and evaluated. Since this site is relatively small in scale and contains limited semi-natural habitat diversity, it was not considered necessary to undertake comprehensive UKHab mapping of the site. All habitat types contained within the site, together with the dominant botanical species and indicators of important habitat types, such as ancient woodland or unimproved grassland, have simply been listed and described where identified.

Habitats and features at the site were evaluated for their potential to support legally protected species and/or species of conservation interest. In addition, observations of any important plant communities, bird assemblages or other potentially valuable ecological features were recorded.

Details of the preliminary survey methods for each legally protected species are given below. Any site-specific limitations to the survey, e.g. access constraints or seasonal constraints, are set out in section 3.11.

2.3 Badgers

Badgers *Meles meles* exploit a range of habitats, including gardens, coniferous woodland, deciduous woodland, mixed woodland and arable land. They live in an underground system of tunnels and nesting chambers, known as a sett, with territories ranging from 30ha to 150ha or more.

Habitats within the site and surrounding area were broadly assessed for their potential to support badgers. Any signs of badger activity, for example setts, footprints, latrines, well-worn paths and foraging marks, were recorded. Further surveys were recommended as appropriate.

2.4 Bats

Bats can use a wide range of features for roosting purposes, including loft spaces, cavity walls, loose tiles, mortice joints and cracks/gaps in a variety of built structures. They can also be found in trees with holes, splits, cracks,



cavities, ivy and loose bark.

Trees, buildings and other structures were broadly assessed for their potential to support roosting bats and further surveys are recommended as appropriate.

The potential for roosting bats for each feature, or group of features was assessed as negligible, low, moderate, or high, in accordance with best practice. Any evidence confirming the presence of bats was clearly recorded including photos and samples taken (e.g. droppings), where appropriate. Further surveys have been recommended as appropriate.

The habitats surrounding the site and wider landscape were broadly assessed for their potential to support foraging and commuting bats. Further surveys have been recommended as appropriate.

2.5 Breeding Birds

Birds can use a wide range of natural and artificial habitats when breeding, including trees, hedgerows, fields, houses and garden sheds. The habitats contained within the site and adjacent areas were broadly assessed for their potential to support important bird species/assemblages, and breeding birds. Any birds identified during the site visit were recorded. Special attention was paid to notable species such as red-listed Birds of Conservation Concern³ and those species afforded special protection on Schedule 1 of the Wildlife and Countryside Act (1981). Further surveys have been recommended as appropriate.

2.6 Dormice

Dormice are found in deciduous woodland and hedgerows, feeding on flowers, pollen, fruits, insects and nuts, favouring hazel *Corylus avellana* and honeysuckle *Lonicera periclymenum* for food and as bedding. The site was broadly assessed for its potential to support dormice. This included use of on-line mapping resources to assess the surrounding area for connectivity to large blocks of woodland, scrub and extensive hedgerow networks.

Further surveys are recommended as appropriate in accordance with best practice guidance⁴.

2.7 Great Crested Newt

Great crested newts breed in ponds during the spring and spend the rest of the year feeding on invertebrates primarily in semi-natural habitats including woodland, hedgerows, marshes and tussocky grassland. A desk study was undertaken to identify ponds and wet ditches within 500m of the site that might support breeding great crested newts. Where access permission was granted, or ponds could be viewed from public roads or footpaths, the ponds were assessed for their potential to support great crested newts using the Habitat Suitability Index (HSI)

³ Stanbury, A., Eaton, M., Aebischer, N., Balmer, N., Douse, A., Lindley, P., McCulloch, N., Noble, D., and Win I. (2021). Birds of Conservation Concern 5: the status of bird populations: the fifth Birds of Conservation Concern in the United Kingdom, Channel Islands and Isle of Man. British Birds 114, pp 723-747.

⁴ Bright, P., Morris, P. and Mitchell-Jones, T. (2006). *The dormouse conservation handbook 2nd Ed.* English Nature, Peterborough.



(Oldham et al 2000)⁵. The value of the site for terrestrially foraging great crested newts and any features that might be used by hibernating newts has also been assessed.

Further surveys have been completed as appropriate, in accordance with best practice guidance (English Nature 2001)⁶.

2.8 Reptiles

The common lizard *Zootoca vivipara*, slow-worm *Anguis fragilis*, grass snake *Natrix helvetica* and adder *Vipera berus* are widespread species that can be found in any of these habitats, whereas smooth snake *Coronella austriaca* and sand lizard *Lacerta agilis* have much more restricted and isolated populations on lowland heathland and sand dunes.

Habitats on the site were broadly assessed for their potential to support reptiles. Particular attention was paid to those features that provide suitable basking areas (e.g. south-facing slopes), hibernation sites (e.g. banks, walls, piles of rotting vegetation) and opportunities for foraging (rough grassland and scrub). Further surveys have been recommended as appropriate.

2.9 Other Notable Species

The site's habitats were broadly assessed for their potential to support species of principal importance for nature conservation (Section 41 NERC Act 2006) and other notable species. This includes mammals such as harvest mouse *Micromys minutus*, hedgehog *Erinaceus europaeus*, brown hare *Lepus europaeus*, and many bird species. The site was broadly assessed for its potential to support important invertebrate assemblages with particular attention paid to features such as standing dead-wood, wet flushes, bare earth banks and botanically rich areas.

3 BASELINE CONDITIONS

3.1 Designated Sites and Granted EPS Licences

There are no statutory designated sites within the zone of influence of the site with a single non-statutory designated site located within 1km of the proposed development; the site is a Local Wildlife Site (LWS) located just north of the A272. Details of the LWS are provided in Table 1.

There are a number of habitats of importance for nature conservation located within 1km of the development site, these include parcels of ancient woodland, and woodpasture and parkland; habitats of importance within 1km of the development site are illustrated in Figure 3.

There is only one granted European Protected Species (EPS) licence for mitigation projects within 1km of the site boundary. The closest EPS licence to the site concerns bat species, the location of the granted licence is visible

⁵ Oldham, R.S., Keeble, J., Swan, M.J.S. and Jeffcote, M. (2000). Evaluating the suitability of habitat for the great crested newt (*Triturus cristatus*). *Herpetological Journal* 10, 143-155.

⁶ English Nature (2001). *Great Crested Newt Mitigation Guidelines*. English Nature, Peterborough.



in Figure 4.

Table 1. Designated sites identified within 1km of the site.

Site name	Designation	Features listed on citation	Proximity
Non-statutory designated sites			
Walden Close Meadows	LWS	The site comprises a field of lowland meadow grassland (a habitat of national importance). The grassland contains a number of characteristic species including sneezewort <i>Achillea ptarmica</i> pepper-saxifrage <i>Silene acaulis</i> , Betony <i>Stachys officinalis</i> and devil's-bit Scabious <i>Succisa pratensis</i> .	470m north.

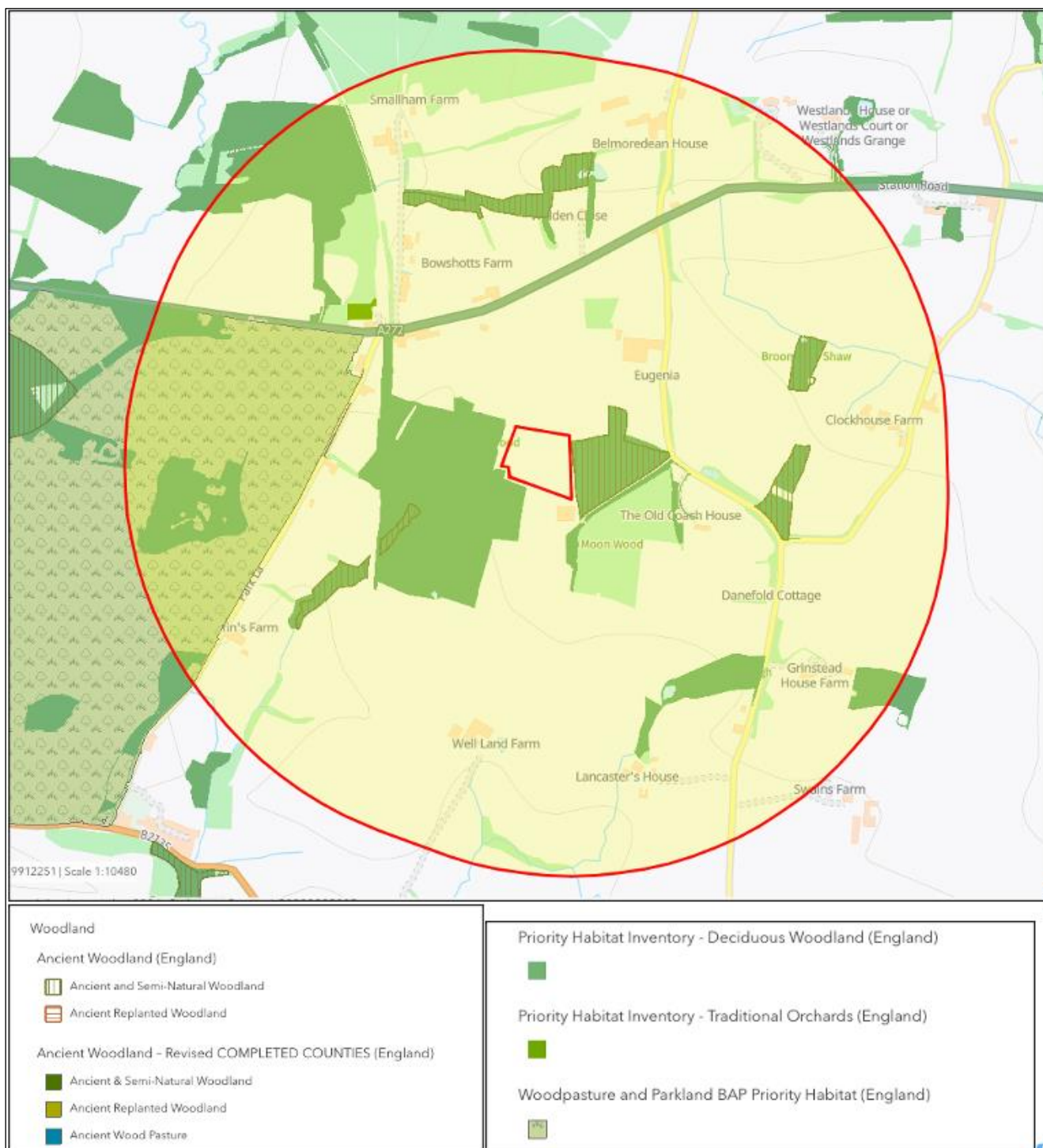




Figure 3. Habitats of importance for nature conservation. Image produced courtesy of Magic maps (<http://www.magic.gov.uk/>, contains public sector information licensed under the Open Government Licence v3.0).

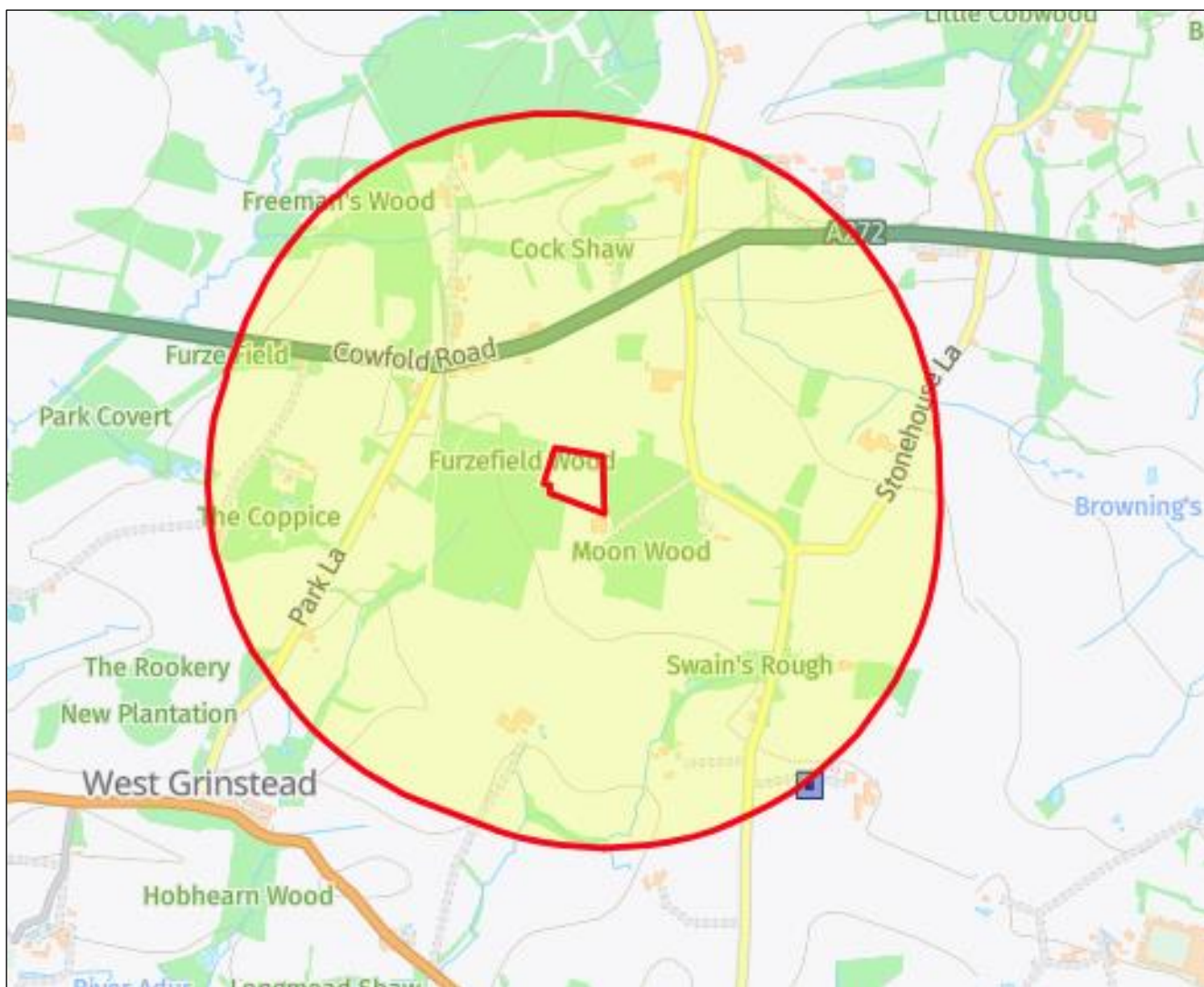


Figure 4. Granted EPS licences within 1km of the application site. Image produced courtesy of Magic maps (<http://www.magic.gov.uk/>, contains public sector information licensed under the Open Government Licence v3.0). Blue square relates to a bat EPS licence.

3.2 Habitats

Habitats on site are comprised of modified grassland with a parcel located to the centre of the field and a separate parcel of modified grassland located adjacent to a mesh wired fence. The grassland fields are bounded by native mixed species hedgerows to all aspects; however, these hedgerows are considered to be outside of the redline boundary of the proposed development. The grassland on site was dominated by Yorkshire fog *Holcus lanatus*, perennial rye grass *Lolium perenne* with occasional occurrences of white clover *Trifolium repens*. The main body of grassland was kept to a short sward height, peaking at around 4cm. The western grassland parcel was located behind a fence and as such was allowed to grow to a taller sward height, peaking at approximately 18cm in height, though the majority was around 8cm in height. This parcel contained the same species as the main parcel of grassland but sections of soft rush *Juncus effusus* and thistle species were also present.



Photograph 1. View of the grassland parcel to the far west of the site with the image taken from the southern aspect facing north. Adjacent woodland parcel is visible to the left of the image with northern hedgerow boundary to the top right.



Photograph 2. View of the main grassland parcels southern aspect with view of the adjacent woodland located to the far left and top of the image, with the western grassland parcel located to the top right of the image.



Photograph 3. View of the western grassland parcel from the southern aspect facing west with view of scattered rushes present across the image.



Photograph 4. View of the main grassland parcel taken from the southeastern aspect of the site with view of the adjacent woodland parcels to the far left and far right of the image and northern hedgerow to the top of the image.



Photograph 5. View of the main grassland parcel (to the right of the fence) and the western grassland parcel (left of the fence) illustrating the variance of swards and species composition. Image facing north.

3.3 Badgers

No signs of any badger activity were seen during the survey assessment, though there are habitats of value for this species within the site and surrounding landscape. It is likely that if any setts were situated within 30m of the site boundary, then evidence of badger activity would have been observed.

Records of badgers are not provided by the records centre, due to the sensitive nature of this information.

3.4 Bats

There are no buildings or trees located on the site. There is a parcel of woodland located to the immediate east and west of the development site, with large tree specimens located within, that are likely to offer suitably roosting habitats.

The grassland parcel located within the site is considered to be of low quality, however, the adjacent woodlands are considered to be of high value to foraging and commuting bats resulting in the grassland parcel considered to be of value to commuting bats between these two habitats.

SxBRC indicates the presence of four bat species within 1km of the site. These records range from 1990 to 2018 with the most recent record from 2018 relating to a brown long eared bat *Plecotus auritus*.



3.5 Breeding Birds

The grassland parcel on site is considered to be of low value to breeding bird species due to its species composition and sward height, the adjacent woodland parcels are considered to be of value to breeding birds, along with the adjacent hedgerow features located just off site. Two red kites *Milvus milvus* were noted flying easterly from the western woodland parcel during the site visit.

SxBRC records search indicates the presence of 35 bird species within 1km of the site. Notable bird species include barn owl *Tyto alba* (most recent record dated 2023), skylark *Alauda arvensis* (most recent record dated 2023) and nightingale *Luscinia megarhynchos* (most recent record dated 2022).

3.6 Dormice

The woodland habitats adjacent to the site have potential to support common dormouse. These habitats are connected to an extensive network of similar habitats across the local landscape; however, these connections appear to be via narrow lines of trees which have been severed by roads, reducing but not omitting, the potential presence of dormice in the wider habitats.

SxBRC identified a dormouse record in the search area from 2017, located approximately 1km north of the site.

Further surveys are not considered proportionate to the development proposal and as such are not recommended.

3.7 Great Crested Newts and other Amphibians

A number of ponds have been identified within 250m of the site. During the on-site assessment, three ponds were identified under the same ownership as the proposed development and within 200m of the proposed development (Figure 5). Subsequent environmental DNA (eDNA) collection and analysis of these three ponds were undertaken on the 7th May 2025 by Joshua Harwood, ACIEEM, and Annie Butcher. The ponds were considered to provide suitability to breeding and aquatic stage great crested newts (GCN). The wider habitats were of mixed suitability with the woodland parcels considered to offer good terrestrial suitability for GCN with the arable fields with lower sward heights offering limited value to terrestrial GCN and other amphibians. EDNA analysis confirmed presence of GCN within ponds 2 and 3.

The SxBRC records search returned 45 records of GCN within 1km of the site, the most recent record was dated from 2017 concerning 16 adult GCN, located 535m north of the site.

The site is considered to offer limited potential for GCN due to its limited sward height, however, the abundance of ponds and nearby records are considered to elevate the site's value, offering some value to commuting/dispersing GCN.

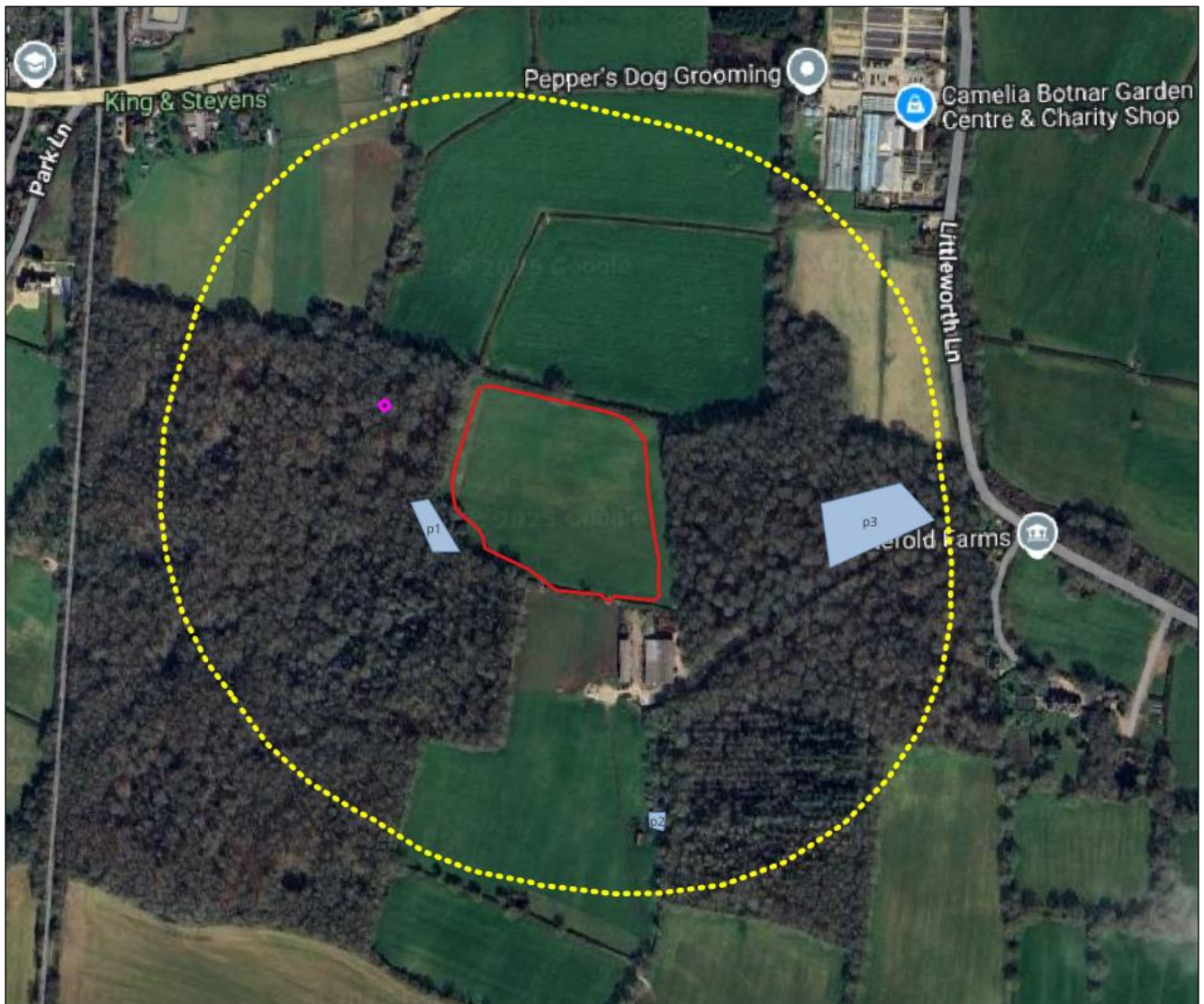


Figure 5. Ponds identified within 250m of the site. Produced using QGIS software, version 4.06.3 – Hannover.

3.8 Reptiles

The site contains habitats considered to be sub-optimal for reptile species. The grassland on site is considered sub optimal due to its limited sward height, offering no shelter from predatory species and limited variety in basking opportunities.

The SxBRC search indicates the presence of slow worm *Anguis fragilis*, common lizard *Zootoca vivipara*, grass snake *Natrix helvetica* and adder *Vipera berus* within 1km of the site. The most recent record was from 2019 and relates to an adder found approximately 500m north of the site.

The site is considered to offer limited suitability to reptile species due to the site's habitat structure, complexity and isolation.



3.9 Invasive Non-native Species

No evidence of invasive non-native species was found during the walkover survey.

SxBRC records search indicates the presence of Himalayan balsam *Impatiens glandulifera* and cherry laurel *Prunus laurocerasus* within 1km of the site.

3.10 Other Notable Species

The site may support commuting or foraging hedgehogs *Erinaceus europaeus* that could utilise the adjacent woodlands and commute across the site. The short sward height on site doesn't offer potential to support species such as harvest mouse *Micromys minutus*.

3.11 Survey Limitations

An initial site assessment such as this is only able to act like a 'snapshot' to record any flora or fauna that is present at the time of the survey. It is therefore possible that some species may not have been present during the survey, but may be evident at other times of the year. For this reason, habitats are assessed for their potential to support some species, even where no direct evidence (such as droppings) has been found.

4 IMPACT APPRAISAL

4.1 Designated Sites

The design proposals will not lead to an increase in recreational pressures on adjacent sites of nature conservation importance or designated sites within the wider area.

Due to the design proposals seeking to form a slurry lagoon, adjacent woodland sites may be impacted, should appropriate construction, mitigation and management not be implemented.

4.2 Habitats

The design proposals will result in the loss of modified grassland to accommodate the proposed development; no other habitats will be directly lost as a result of the proposed development. The proposed development may indirectly impact the adjacent habitats including the woodland parcels and adjacent waterbodies through increased nutrient enrichment which may reduce the soil/water quality reducing the ground flora/marginal vegetation if mitigation measures and appropriate construction are not considered. The lagoons design is to be constructed in line with SSAFO guidance ensuring that the lagoon is impermeable. The development must also ensure that there is an appropriate buffer between the proposals and adjacent woodland parcels (with particular care taken to avoid impacting the ancient woodland parcel). The scheme must ensure that the design is situated a minimum of 15m from the ancient woodland parcel and ensure that no development activities (including but not limited to storage of materials) are undertaken within this buffer. An ancient woodland construction plan may be required to secure buffer zones and activities around this habitat type.



4.3 Badgers

No signs of badger activity were identified during the assessment and no badger setts are situated on or near to the proposed construction zone. No further surveys or mitigation for badgers is advised, however, if any signs of digging by large animals is identified on or near to the site in the future, prior to development or the submission of a planning application, further surveys would likely be required.

4.4 Bats

The site is not considered to support roosting bat species.

The hedgerows and woodland edge habitats that border the site are likely to be used by foraging and commuting bats as part of a wider resource across the landscape. These features are not considered to be directly impacted through the proposed development and will still form commuting corridors/dark corridors post development allowing continued usage should any commuting/foraging bat species use these features.

As the site may be used by foraging and commuting bats, it is important that the potential for disturbance from artificial lights is considered. The proposed development is likely to require an 'ecologically sensitive lighting scheme' in accordance with guidance produced by the Bat Conservation Trust (summarised in Appendix 4) should lighting be required to facilitate the development.

4.5 Breeding Birds

The site boundary features are considered likely to support nesting bird species; these features are not considered to be directly impacted and as such no further surveys are recommended however appropriate timing of works to avoid the bird nesting season (1st March to 31st August inclusive) may be required to avoid indirectly impacting nesting bird species through the use of heavy machinery, for example, close to nesting features.

4.6 Dormice

The proposed development is highly unlikely to impact dormice given the distance between the proposed development and the suitable habitats adjacent to the site, as such no further surveys are recommended.

As dormice are nocturnal, it is important that the potential for disturbance from artificial lights is considered, as for bats (see Appendix 4).

4.7 Great Crested Newts

eDNA analysis undertaken of three ponds close to the proposed development confirmed DNA presence for GCN in two of the three ponds (pond 2 and pond 3). As the proposed development seeks to significantly alter the existing topography of the site (the largest elevation change is considered to be ~1.0m) to create the lagoon and bunker features, it is considered likely that a mitigation licence would be required. In order to secure a mitigation licence further surveys may be required, it may however be possible to join a district level licencing scheme to secure an appropriate mitigation licence. The eDNA summary is shown in Appendix 3. The proposed development



will need to ensure suitable features are created to reduce the likelihood of any GCN or other amphibians entering the slurry lagoon where they may become entrapped or suffer degradation as a result of the poor nutrient quality.

5 OPPORTUNITIES FOR ENHANCEMENT

The proposed development is restricted in its opportunities to enhance local biodiversity and wildlife as the proposed scheme encompasses a large portion of the proposed development site. The development proposal is encouraged to enhance the grassland parcels bordering the site with increased species mixes which will likely increase the flowering invertebrate abundance and as such increase the likely foraging bird and bat species with limited risk of harm to these species.

6 CONCLUSIONS

The land at Danefold Farm is comprised of poor quality habitat but is surrounded by higher quality habitat formed of hedgerows and woodland, the wider habitats also include waterbodies with confirmed GCN presence. The development proposals will result in the loss of modified grassland parcels and would likely impact upon terrestrial stage GCN as a result. The precautionary mitigation set out in section 4.5 must be followed to ensure that there is not a breach of the Wildlife and Countryside Act.

It is important that no habitat clearance or other site preparation work should be undertaken until planning permission has been granted and all relevant protections for habitats of importance and protected species have been detailed and implemented. Please be advised that any work to remove or modify habitats outside of typical management may undermine a future planning application.

Should you need any further advice on the information provided above, please do not hesitate to contact The Ecology Co-op, info@ecologyco-op.co.uk, www.ecologyco-op.co.uk, Office: 01798 861800.



APPENDIX 1 – Wildlife Legislation and National Planning Policy

Introduction

The following text is intended for general guidance only and does not constitute comprehensive professional legal advice. It provides a summary of the current legal protection afforded to wildlife in general and certain species. It includes current national planning policy relevant to nature conservation.

The ‘Birds Directive’, ‘Habitats Directive’ and ‘Natura 2000 Sites’

The Council Directive 79/409/EEC on the Conservation of Wild Birds (“the Birds Directive”) sets a framework for the protection of wild birds. Under the Directive, several provisions are made including the designation and protection of ‘Special Protection Areas’ (SPAs) – areas which support important bird populations, and the legal protection of rare or vulnerable species.

The Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora (the “Habitats Directive”) directs member states of the EU to take measures to maintain the favourable conservation status of important habitats and species. This requires the designation of a series of sites which contain important populations of species listed on Annex II of the Directive (for example Bechstein’s bat *Myotis bechsteinii*, Barbastelle bat *Barbastella barbastellus* and white-clawed crayfish *Austropotamobius pallipes*). Together with ‘Special Areas of Conservation’ (SACs), SPAs form a network across Europe of protected areas known as the ‘Natura 2000 sites’.

Annex IV lists species in need of more strict protection, these are known as “European Protected Species (EPS)”. All bat species, common dormice *Muscardinus avellana*, otter *Lutra lutra* and great crested newts *Triturus cristatus* are examples of EPS that are regularly encountered during development projects.

The ‘Habitats Regulations’

The Conservation of Habitats and Species Regulations 2017, as amended (the “Habitats Regulations”) is the principle means of transposing the Habitats Directive and the Birds Directive, and updates the Conservation (Natural Habitats, &c.) Regulations 1994 (“the 1994 regulations”) in England and Wales.

‘Natura 2000’ sites, now known as National Site Network sites under the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019, receive the highest level of protection under the Regulations which requires that any activity within the zone of influence of these sites would be subject to a Habitats Regulations Assessment (HRA) by the competent authority (e.g. planning authority), leading to an Appropriate Assessment (AA) in cases where ‘likely significant effects’ to the conservation objectives are identified.

For European Protected Species, Regulation 41 makes it a criminal offence to:

- deliberately capture, injure or kill any such animal;
- deliberately disturb wild animals of such species;
- deliberately take or destroy their eggs (where relevant);
- damage or destroy a *breeding or resting place* of such an animal;
- possess, control, sell or exchange any live or dead animal or plant, of such species;
- deliberately pick, collect, cut, uproot or destroy a wild plant of such species.

The Habitats Directive and Habitats Regulations provide for the derogation from these prohibitions for specific



reasons provided certain conditions are met. An EPS licensing regime allows operations that would otherwise be unlawful acts to be carried out lawfully. Natural England is the licensing Authority and, in order to grant a license, ensures that three statutory conditions (sometimes referred to as the 'three derogation tests') are met:

- a licence can be granted for the purposes of “preserving public health or safety or for other imperative reasons of overriding public interest including those of a social or economic nature and beneficial consequences of primary importance for the environment” (Regulation 53 (2) (e);
- a licence can be granted if “there are no satisfactory alternatives” to the proposed action;
- a licence shall not be granted unless the action authorised will not be detrimental to the maintenance of the population of the species concerned at a favourable conservation status in their natural range.

Wildlife and Countryside Act (1981) as amended.

This remains one of the most important pieces of wildlife legislation in the UK. There are various schedules to the Act protecting birds (Schedule 1), other animals including insects (Schedule 5), plants (Schedule 8), and control of invasive non-native species (Schedule 9).

Under the Wildlife and Countryside Act (WCA) 1981, all wild birds (with the exception of those listed on Schedule 2), their eggs and nests are protected by law and it is an offence to:

- take, damage or destroy the nest of any wild bird while it is in use or being built
- take or destroy the egg of any wild bird
- disturb any bird listed on Schedule 1, while it is nest building, or at a nest with eggs or young, or disturb the dependant young of any such bird.

Schedule 5 lists all non-avian animals receiving protection to a varied degree. At its strongest, the Act makes it an offence to intentionally kill, injure or take any wild animal listed on Schedule 5, and prohibits interference with places used for shelter or protection, or intentionally disturb animals while occupying such places. Examples of species with *full protection* include all EPS, common reptile species, water vole *Arvicola amphibius*, white-clawed crayfish *Austropotamobius pallipes* and Roman snail *Helix pomatia*. Other species are protected from sale, barter or exchange only, such as white letter hairstreak *Satyrrium w-album*.

The Act makes it an offence to intentionally pick, uproot or destroy any plant or seed, and sell or possess any plant listed on Schedule 8. It is also an offence to intentionally uproot any wild plant not listed on Schedule 8 unless authorised [by the land owner]. Species on Schedules 5 and 8 are reviewed every 5 years when species can be added or removed.

Measures for the prevention of spreading non-native species which may be detrimental to native wildlife is included in the Act, which prohibits the release of animals or planting of plants into the wild of species listed on Schedule 9 (for example, Japanese knotweed *Fallopia japonica*, Himalayan balsam *Impatiens glandifera*, New Zealand Pygmyweed *Crassula helmsii*).

The Wildlife and Countryside Act 1981 (as amended) also prohibits certain inhumane methods of traps and devices for the capture or killing of wild animals and certain additional methods such as fixed trap, poisoning with gas or smoke, or spot-lighting with vehicles for killing species listed on Schedule 6 of the Act (this includes all bat species, badger, otter, polecat, dormice, hedgehog and red squirrel).

Natural Environment and Rural Communities (NERC) Act (2006)

The NERC Act (2006) created the statutory nature conservation body Natural England, and places a statutory



duty on all public bodies, including planning authorities, under Section 40, to take, or promote the taking by others, steps to further the conservation of *habitats and species of principal importance for the conservation of biodiversity* in England (commonly referred to as the ‘Biodiversity Duty’). This duty extends to all public bodies the biodiversity duty of Section 74 of the Countryside and Rights of Way (CROW) Act 2000, which placed a duty only on Government and Ministers. Section 41 of the NERC Act lists the habitats and species of principle importance. This includes a wide range of species from mosses, vascular plants, invertebrates through to mammals and birds. It originates from the priority species listed under the UK Biodiversity Action Plan (UK BAP) with some omissions and additions.

Environment Act (2021)

The Environment Act sets a target of halting the decline in species through the inclusion of a legally binding 2030 species abundance target. Aiming to restore natural habitats and enhance biodiversity, the Act requires new developments to improve or create habitats for nature (through mechanisms such as mandatory Biodiversity Net Gain), and tackle deforestation. Going forwards, UK businesses will need to look closely at their supply chains as amongst other measures they will be prohibited from using commodities associated with wide-scale deforestation. Woodland protection measures are also strengthened through the Act.

The Act enables the reform of the Habitats Regulations and further improves protection for nature through the establishment of Local Nature Recovery Strategies that support national Nature Recovery Networks. In addition, the Act provides for the production of Protected Site Strategies and Species Conservation Strategies, aimed at supporting the design and delivery of strategic approaches to deliver better outcomes for nature.

Protection of Badgers Act (1992)

The badger *Meles meles* is afforded specific legal protection in Britain under the Protection of Badgers Act (1992), and Schedule 6 of the Wildlife and Countryside Act 1981 (as amended) (see above).

Under this legislation, it is a criminal offence to:

- intentionally kill, injure, take, possess, or cruelly ill-treat, a badger, or to attempt to do so;
- interfere with a sett, by damaging or destroying it;
- to obstruct access to, or any entrance of, a badger sett; or
- to disturb a badger when it is occupying a sett.

A licence may be obtained from Natural England to permit certain prohibited actions for a number of defined reasons including interference of a sett for the purpose of development, provided that a certain number of conditions are met. Note that licenses are not normally granted for works affecting badgers between the end of November and the start of July.

National Planning Policy Framework

The National Planning Policy Framework (NPPF 2024)⁷ sets out the Government’s view on how planners should balance nature conservation with development and helps ensure that Government meets its biodiversity commitments with regard to the operation of the planning system.

Paragraph 192, states that council plans should “*promote the conservation, restoration and enhancement of priority habitats, ecological networks and the protection and recovery of priority species; and identify and pursue*

⁷ HM Government (2024). National Planning Policy Framework. Department for Communities and Local Government. Available online at: <https://assets.publishing.service.gov.uk/media/675abd214cbda57cacd3476e/NPPF-December-2024.pdf>.



opportunities for securing measurable net gains for biodiversity.”

The Office of the Deputy Prime Minister (ODPM) Circular 06/2005, 2005)⁸. In accordance with the NPPF, it is important that developments should contribute to and enhance the natural and local environment by:

- minimising impacts on existing biodiversity and habitats;
- providing net gains in biodiversity and habitats, wherever possible;
- establishing coherent ecological networks that are more resilient to current and future pressures.

UK Post-2010 Biodiversity Framework

The UK Biodiversity Action Plan (UK BAP), first published in 1994, was the UK’s response to the commitments of the Rio Convention on Biological Diversity (1992) until 2010, when the UK BAP was replaced by the UK Post-2010 Biodiversity Framework. This framework covers the period 2011 to 2020 and forms the UK government’s response to the new strategic plan of the United Nations Convention on Biodiversity (CBD) published in 2010. This promotes a focus on individual countries delivering target for protection for biodiversity through their own strategies.

The most recent biodiversity strategy for England, 'Biodiversity 2020: A strategy for England's wildlife and ecosystem services' was published by Defra (2011), and a progress update was provided in July 2013 (Defra 2013).

'Biodiversity 2020' builds on the Natural Environment White Paper for England – 'The Natural Choice', published on 7 June 2011, and sets out the strategic direction for biodiversity policy for the next decade.

Biodiversity 2020 deliberately avoids setting specific targets and actions for local areas and species because the Government believes that local people and organisations are best placed to decide how to implement the strategy in the most appropriate way for their local area or situation.

Birds of Conservation Concern (BoCC)

In 1996, the UK’s leading non-governmental bird conservation organisations listed the conservation status of all bird species in the UK against a series of criteria relating to their population size, trends and relative importance to global conservation. The lists, known as the 'Red', 'Amber' and 'Green' lists (in order of decreasing concern) are used to inform key conservation policy and decisions. The lists are reviewed every five years and are a useful reference for determining the current importance of a particular site for birds. The most recent review was undertaken in 2021 (Stanbury et al, 2021), which provides an up to date assessment of the conservation status of birds in the UK.

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⁸ HM Government (2005) ODPM Circular 06/05 Government Circular: *Biodiversity and Geological Conservation – Statutory Obligations and their Impact within the Planning System*. Available online at:
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APPENDIX 2 – Local Plan Policy's

Table 1: Horsham District Council – Horsham District Local Plan 2023-2040 (December 2023)

Policy Number/Title	Policy Summary
Strategic Policy 13: The Natural Environment and Landscape character	The Natural Environment and landscape character of the District, including the landscape, landform and development pattern, together with protected landscapes and habitats, will be protected against inappropriate development. The Council will expect development proposals to be landscape-led from the outset so that they clearly inform the design and layout. Proposals will also be required to: 1. Protect, conserve and enhance the landscape and townscape character, taking into account features / areas identified as being of landscape importance and the individual settlement characteristics, and maintain settlement separation; 2. Maintain and enhance the Green Infrastructure Network, the Local Nature Recovery Strategy and national Nature Recovery Network and, where practicable, help to address any identified needs and deficiencies in these networks across the District; 3. Maintain and enhance the existing network of geological sites and biodiversity, including safeguarding existing designated sites and species, and secure measurable net gains in biodiversity; and 4. Incorporate SuDS into a scheme in an optimal location for their purpose whilst also securing landscape and biodiversity enhancements and delivering high-quality green spaces. Proposals will be expected to provide details to demonstrate that the 62 whole life management and maintenance of the SuDS are appropriate, deliverable and will not cause harm to the natural environment and/or landscape.
Strategic Policy 14: Countryside Protection	1. Outside built-up area boundaries and secondary settlements, the rural character and undeveloped nature of the countryside will be protected against inappropriate development. Any proposal must be essential to, and justify, its countryside location, and must meet one of the following criteria: a) Support the needs of agriculture or forestry b) Enable the extraction of minerals or the disposal of waste; c) Provide for quiet informal recreational use; or d) Enable the sustainable development of rural areas. 2. In addition, all proposals must be appropriately integrated within the landscape and be of a scale appropriate to its countryside character and location. Development will be considered acceptable where it does not lead, either individually or cumulatively, to a significant increase in the overall level of activity in the countryside, and protects, conserves, and seeks to enhance, the key features and characteristics of the landscape character area in which it is located, including; a) The development pattern of the area, its historical and ecological qualities, tranquillity and sensitivity to change; b) The pattern of woodlands, fields, hedgerows, trees, waterbodies and other features; c) The landform of the area; and d) The protection of dark skies, in particular where it may impact on a designated International Dark Sky Reserve (IDSR), Neighbourhood Plan designations and High Weald AONB Management Plan objectives.



Strategic Policy 16: Protected Landscapes	1. Development proposals within and adjacent to the High Weald AONB must demonstrate how their development proposals conserve and enhance the natural beauty of the AONB, having appropriate regard to the setting and views into and out of the AONB, the High Weald AONB Management Plan, any updates and any other relevant documents. Proposals will be required to set out any proposed mitigation or compensation measures needed to address any harm. 66 2. Small scale development that helps to support the social and economic well-being of the AONB will be supported, provided that the scheme is compatible with the purpose of the designation. 3. Major development within the AONB will only be permitted in exceptional circumstances. Applicants will be required to demonstrate why the proposal is in the public interest and what alternatives to the proposal have been considered. 4. Proposals within land that contributes to the setting of the South Downs National Park should be consistent with National Park purposes and have regard to the South Downs Local Plan, the South Downs Integrated Landscape Character Assessment, the South Downs Partnership Management Plan and any other relevant document and updates. In particular, proposals should not cause harm to the special qualities (including dark skies), local distinctiveness or sense of place, by negatively affecting views into and out of the National Park. Proposals will be required to set out any proposed mitigation or compensation measures needed to address any harm.
Strategic Policy 17: Green Infrastructure and Biodiversity	Green Infrastructure 1. Development will be supported where it can demonstrate that it maintains and enhances the existing network of green infrastructure and contributes to the delivery of public open space, the Local Nature Recovery Strategy, Nature Recovery Network, natural capital, ecosystem services and / or biodiversity. Green Infrastructure should be integral to the design and layout of development, and new provision, including green linkages, should be provided taking into account Natural England's green infrastructure guidance and the council's green infrastructure strategy. Provision should seek to optimise public access to open space and nature via foot, bicycle, wheeling, and also horse as appropriate. 2. Proposals that would result in any loss, degradation or harmful impacts to green infrastructure, or core areas of the Local Nature Recovery Strategy and Nature Recovery Network will be resisted unless it can be demonstrated that new opportunities will be provided that appropriately mitigates and / or compensates for the respective harm and ensures that the ecosystem services of the area are retained and enhanced. Development proposals will be expected to remove invasive species. 3. Proposals will be expected to retain and enhance existing priority habitats and trees, and accord with the aims and objectives of the Green Infrastructure and Local Nature Recovery Strategies. Habitat enhancement including additional hedgerow and tree planting must take account of the local landscape and habitat context. It should seek to optimise biodiversity, ecological connectivity and function, and climate change resilience. a) Development likely to affect a watercourse and its associated corridor should seek to conserve and enhance its ecological, landscape and recreational



	value. This should include providing adequate natural buffer zones to the watercourse. Biodiversity 5. The Council will support appropriate new development which delivers at least 12% biodiversity net gain and: - Retains and enhances significant features of nature conservation value on development sites; - Makes a positive contribution to biodiversity and accords with the aims and objectives of the Green Infrastructure and Local Nature Recovery Strategies, through the creation of appropriate green spaces, that provide linkages between habitats to create local and regional ecological networks that enable the movement of wildlife through development sites; and / or - Following the principle of 'right habitat in the right place', significantly increases woodland or other habitats for the purpose of appropriately enhancing biodiversity, carbon sequestration, pollution control, and / or flood mitigation. 6. Relevant development proposals will be expected to deliver 12% biodiversity net gain and must submit Biodiversity Net Gain information to show how this will be achieved using the mandated Biodiversity Metric or the Small Sites Metric as appropriate and must abide by the metric trading rules. Submissions must make clear what will be provided to meet no net loss and what will deliver net gains. The net gain must be achieved through the delivery of appropriate on-site biodiversity net gain or, where this is not practicable, through off-site net gain within the District especially areas, as suitable to the habitats subject to gain, identified in the District's Green Infrastructure Strategy or the Local Nature Recovery Strategy, or as agreed by the Council. All such schemes, excluding any respective element using statutory biodiversity credits, must submit for approval by the Council a funded maintenance and management plan, including monitoring / reporting and appropriate enforcement processes, that secures the biodiversity net gains for at least 30 years. 7. All other development proposals must seek to demonstrate how measurable biodiversity net gains will be delivered. Protected Sites and Species 8. Proposals must give appropriate consideration to protected and notable species. They will be expected to protect priority species and seek to aid their recovery, and must conserve, restore and enhance priority habitats, and should create and manage appropriate new habitats, taking into account pollination, where practicable. 9. Particular consideration will be given to the hierarchy of sites and habitats, including buffer areas, within the District, or functionally linked to, as follows: - Special Protection Areas (SPAs), Special Areas of Conservation (SACs) and Ramsar sites; - Sites of Special Scientific Interest (SSSIs), National Nature Reserves (NNRs), Veteran Trees, Ancient Woodland and other irreplaceable habitats; 75 - Local Wildlife Sites (LWS), Local Nature Reserves (LNRs) and any areas of priority habitats including traditional orchards, local geodiversity, Core Sites in the emerging NRN and other irreplaceable habitats not already identified in a & b above. 10. An appropriate buffer around woodland will be required, this will be at least 15m around Ancient Woodland or greater in accordance with good practice, and
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	consideration should be given to the potential for protected species, such as bats, and impacts on hydrology. Around ancient and veteran trees a minimum buffer zone of at least 15 times larger than the diameter of the tree, or 5 metres from the edge of the tree's canopy whichever is the larger, will be required. 11. Where the felling of a tree is necessary, for example due to disease, replacement planting with a suitable tree species, age and location to retain and enhance the link with the wider network of habitats and Green Infrastructure, will be required. 12. Where development is anticipated to have a direct or indirect adverse impact on sites or features of importance to nature conservation, development will be refused unless it can be demonstrated that: a) The mitigation hierarchy has been applied and the objectives of a site's designation, where applicable, and integrity of the area will not be undermined; b) The reason for the development clearly outweighs the likely impact to notified features and / or the need to protect the value of the site; and c) Appropriate mitigation and compensation measures will be provided alongside the delivery of measurable biodiversity net gain as relevant. 13. Any development with the potential to impact the Arun Valley SPA / SAC / Ramsar site, The Mens SAC and / or Ebernoe Common SAC will be subject to a Habitats Regulation Assessment to determine the need for an Appropriate Assessment. In addition, development will be required to be in accordance with the necessary mitigation measures for development set out in the Habitat Regulation Assessment of this Plan.
Policy 18: Local Green Space	1. Local green and open spaces should be protected. Areas designated as Local Green Space, as identified on the Policies Map, will be safeguarded from development unless it can be demonstrated that: a) Development is proposed to enhance Local Green Space functions, for example through improvements to access, recreation and wildlife; or b) It is required for a statutory utility infrastructure purpose, for example water, gas, electricity or telecommunications provision. 2. Within Neighbourhood Plans, the creation of new areas of Local Green Space will be supported providing it is within reasonably close proximity to the community it serves, is local in character and is not an extensive track of land. It must also meet the relevant criteria, as set out in any relevant national planning guidance documents, in relation to scale, beauty, historic significance, recreational value, tranquillity and ecological value, and does not conflict with the strategic policies of this Local Plan.



APPENDIX 3 – environmental DNA Analysis



APPENDIX 4 – Reducing Impacts of Artificial Light

Bright external lighting can have a detrimental impact upon foraging and commuting bat flight paths, but more importantly can also cause bats to remain in their roosts for longer. Artificial lighting can also cause significant impacts to other nocturnal species, most notably moths and other nocturnal insects. It can also result in disruption of the circadian rhythms of birds, reducing their fitness.

Guidelines issued by the Bat Conservation Trust⁹ should be referred to when designing the lighting scheme. Note that lighting designs in very sensitive areas should be created with consultation from an ecologist and using up-to-date bat activity data where possible. The guidance contains techniques that can be used on all sites, whether a small domestic project or larger mixed-use, commercial or infrastructure development. This includes the following measures:

Avoid lighting key habitats and features altogether

There is no legal duty requiring any place to be lit. British Standards and other policy documents allow for deviation from their own guidance where there are significant ecological/environmental reasons for doing so. It is acknowledged that in certain situations lighting is critical in maintaining safety, such as some industrial sites with 24-hour operation; however, in the public realm, while lighting can increase the perception of safety and security, measurable benefits can be subjective. Consequently, lighting design should be flexible and be able to fully consider the presence of protected species.

Apply mitigation methods to reduce lighting to agreed limits in other sensitive locations – lighting design considerations

Where bat habitats and features are considered to be of lower importance or sensitivity to illumination, the need to provide lighting may outweigh the needs of bats. Consequently, a balance between a reduced lighting level appropriate to the ecological importance of each feature and species, and the lighting objectives for that area will need to be achieved. The following are techniques which have been successfully used on projects and are often used in combination for best results:

- dark buffers, illuminance limits and zonation;
- sensitive site configuration, whereby the location, orientation and height of newly built structures and hard standing can have a considerable impact on light spill;
- consideration of the design of the light and fittings, whereby the spread of light is minimised ensuring that only the task area is lit. Flat cut-off lanterns or accessories should be used to shield or direct light to where it is required. Consideration should be given to the height of lighting columns. It should be noted that a lower mounting height is not always better. A lower mounting height can create more light-spill or require more columns. Column height should be carefully considered to balance task and mitigation measures. Consider no lighting solutions where possible such as white lining, good signage, and LED cat's eyes. For example, light only high-risk stretches of roads, such as crossings and junctions, allowing headlights to provide any necessary illumination at other times;
- screening, whereby light spill can be successfully screened through soft landscaping and the installation of walls, fences and bunding;
- glazing treatments, whereby glazing should be restricted or redesigned wherever the ecologist and lighting professional determine there is a likely significant effect upon key bat habitat and features;

⁹ Bat Conservation Trust and Institute for Lighting Professionals (2023) Guidance note 08/23. Bats and Artificial Lighting in the UK. <https://www.theilp.org.uk/documents/guidance-note-8-bats-and-artificial-lighting/>



- creation of alternative valuable bat habitat on site, whereby additional or alternative bat flightpaths, commuting habitat or foraging habitat could result in appropriate compensation for any such habitat being lost to the development;
- dimming and part-night lighting. Depending on the pattern of bat activity across the key features identified on site it may be appropriate for an element of on-site lighting to be controlled either diurnally, seasonally or according to human activity. A control management system can be used to dim (typically to 25% or less) or turn off groups of lights when not in use.

Demonstrate compliance with illuminance limits and buffers

- *Design and pre-planning phase*; it may be necessary to demonstrate that the proposed lighting will comply with any agreed light-limitation or screening measures set as a result of your ecologist's recommendations and evaluation. This is especially likely to be requested if planning permission is required.
- *Baseline and post-completion light monitoring surveys*; baseline, pre-development lighting surveys may be useful where existing on or off-site lighting is suspected to be acting on key habitats and features and so may prevent the agreed or modelled illuminance limits being achieved.
- *Post-construction/operational phase compliance-checking*; as a condition of planning, post-completion lighting surveys by a suitably qualified person should be undertaken and a report produced for the local planning authority to confirm compliance. Any form of non-compliance must be clearly reported, and remedial measures outlined. Ongoing monitoring may be necessary, especially for systems with automated lighting/dimming or physical screening solutions.

Lighting Fixture Specifications

The Bat Conservation Trust recommends the following specifications for lighting on developments to prevent disturbance:

- lighting spectra: peak wavelength >550nm
- colour temperature: <2700k (warm)
- reduction in light intensity
- minimal UV emitted
- upward light ratio of 0% and good optical control.

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